

WHAT IS CLAIMED IS:

1. A method of packaging a heat conductive composition for transferring heat from a heat-dissipating component to a heat-dissipater comprising the steps:
  - (a) providing a heat conductive composition comprised of:
    - (i) 60% to 90% by weight of paraffin;
    - (ii) 0% to 5% by weight of resin; and
    - (iii) 10% to 40% by weight of graphite;
  - (b) providing a planner substrate; and
  - (c) forming a film of the heat conductive composition provided in step (a) upon the substrate of step (b).
2. The method of Claim 1 wherein in step (c), said film of said heat conductive composition is applied to the substrate to a thickness of 3 mil or less.
3. The method of Claim 2 wherein said heat conductive composition is applied to a thickness of 0.5 to 3 mil.
4. The method of Claim 1 further comprising the step:
  - (d) cutting the film formed upon the substrate to a particular shape.
5. The method of Claim 1 wherein in step (a), said heat conductive composition further comprises petrolatum.
6. The method of Claim 5 wherein said petrolatum is present in an amount no greater than about 22.5% by weight of said composition.
7. A method of applying a heat conductive composition to a heat sink comprising the steps:
  - (a) providing a heat-conductive composition comprised of:
    - (i) 60% to 90% by weight of paraffin;
    - (ii) 0% to 5% by weight of resin; and
    - (iii) 10% to 40% by weight of graphite;
  - (b) heating the surface of said heat sink; and
  - (c) applying the heat conductive composition in step (a) to the heated heat sink in step (b).
8. The method of Claim 7 wherein in step b, said heat sink is heated to a temperature not to exceed 51° C.
9. The method of Claim 8 wherein said heat sink is heated to a temperature between 40° to 50°.

10. The method of Claim 7 wherein in step a, said heat conductive composition further comprises:
  - (d) petrolatum.
11. The method of Claim 9 wherein said petrolatum is present in an amount no greater than about 22.5% by weight of said composition.
- ~~12.~~ A method of applying a heat conductive composition to a heat sink comprising the steps:
  - (a) providing a heat-conductive composition comprised of:
    - (i) 60% to 90% by weight of paraffin;
    - (ii) 0% to 5% by weight of resin; and
    - (iii) 10% to 40% by weight of graphite;
  - (b) applying a solvent to an interface mating surface formed on the heat sink; and
  - (c) applying the heat conductive composition in step (a) to the interface mating surface in step (b).
13. The method of Claim 12 wherein in step (a) said composition further comprises (d) petrolatum.
14. The method of Claim 13 wherein said petrolatum is present in an amount no greater than about 22.5% by weight of said composition.
- ~~15.~~ A method of applying a heat conductive composition to a heat sink comprising the steps:
  - (a) providing a heat conductive composition comprised of:
    - (i) 60% to 90% by weight of paraffin;
    - (ii) 0% to 5% by weight of resin; and
    - (iii) 10% to 40% by weight of graphite; and
  - (b) compressing said composition in step (a) onto an interface mating surface formed upon said heat sink.
16. The method of Claim 15 wherein in step (a) said composition comprises (d) petrolatum.
17. The method of Claim 16 wherein said petrolatum is present in an amount no greater than about 22.5% by weight of said composition.
18. The method of Claim 1 wherein in step (b), said planner substrate is selected from the group consisting of a polyester release substrate and silicone-treated paper.
- ~~19.~~ A thermally-conductive composition for facilitating the transfer of heat from an

electronic component to a heat sink comprising:

- (a) 60% to 90% by weight of paraffin;
  - (b) 0% to 5% by weight of resin; and
  - (c) 10% to 40% by weight of an electrically-conductive filler.
- 20. The composition of Claim 19 wherein said electrically-conductive filler is selected from the group consisting of graphite, diamond, silver, and copper.
  - 21. The composition of Claim 19 wherein said composition is formulated to take a form selected from the group consisting of a film and a bar.
  - 22. The composition of Claim 19 wherein said resin is present in an amount of 3.3% or less by weight of said composition.
  - 23. The composition of Claim 19 wherein said composition further comprises petrolatum, said petrolatum being present in an amount no greater than 22.5% by weight of said composition.
  - 24. The composition of Claim 19 wherein said paraffin comprises 51°C paraffin wax.
  - 25. The composition of Claim 19 wherein said paraffin comprises 60°C paraffin wax.
  - 26. The composition of Claim 19 wherein said resin comprises an ethylene vinyl acetate copolymer.
  - 27. The method of Claim 1 wherein said paraffin comprises 50°C paraffin wax.
  - 28. The method of Claim 1 wherein said paraffin comprises 60°C paraffin wax.
  - 29. The method of Claim 1 wherein said resin comprises an ethylene vinyl acetate copolymer.
  - 30. The method of Claim 7 wherein said paraffin comprises 50°C paraffin wax.
  - 31. The method of Claim 7 wherein said paraffin comprises 60°C paraffin wax.
  - 32. The method of Claim 7 wherein said resin comprises an ethylene vinyl acetate copolymer.
  - 33. The method of Claim 12 wherein said paraffin comprises 50°C paraffin wax.
  - 34. The method of Claim 12 wherein said paraffin comprises 60°C paraffin wax.
  - 35. The method of Claim 12 wherein said resin comprises an ethylene vinyl acetate copolymer.
  - 36. The method of Claim 15 wherein said paraffin comprises 50°C paraffin wax.
  - 37. The method of Claim 15 wherein said paraffin comprises 60°C paraffin wax.
  - 38. The method of Claim 15 wherein said resin comprises an ethylene vinyl acetate copolymer.

39. The composition of Claim 19 wherein said paraffin component is present in an amount of approximately 67.2% by weight; said resin is present in amounts of approximately 3.3% by weight; and said electrically-conductive fillers present in an amount of approximately 29.5% by weight.

40. A thermally-conductive composition for facilitating the transfer of heat from an electronic component to a heat sink, said composition consisting essentially of:

- (a) a wax component;
- (b) a resin component;
- (c) an electrically-conductive filler; and
- (d) optionally, a thinning agent; and
- (e) optionally, a thickening agent; and
- (f) optionally, a petrolatum component.

41. The composition of Claim 40 wherein said thinning agent comprises a polyalphaolephin.

42. The composition of Claim 40 wherein said thinning agent is present in an amount no greater than about 2% by weight of said composition.

43. The composition of Claim 40 wherein said thickening composition comprises fumed silica.

44. The composition of Claim 40 wherein said thickening agent is present in an amount no greater than about 5.0% by weight of said composition.

45. The composition of Claim 40 wherein said petrolatum component is present in an amount no greater than about 22.5% by weight of said composition.

46. A thermally-conductive composition for facilitating the transfer of heat from an electronic component to a heat sink, said composition comprising:

- (a) 67-67.5% by weight of paraffin;
- (b) 29-30% by weight of graphite; and
- (c) 3.0-3.5% by weight of resin.